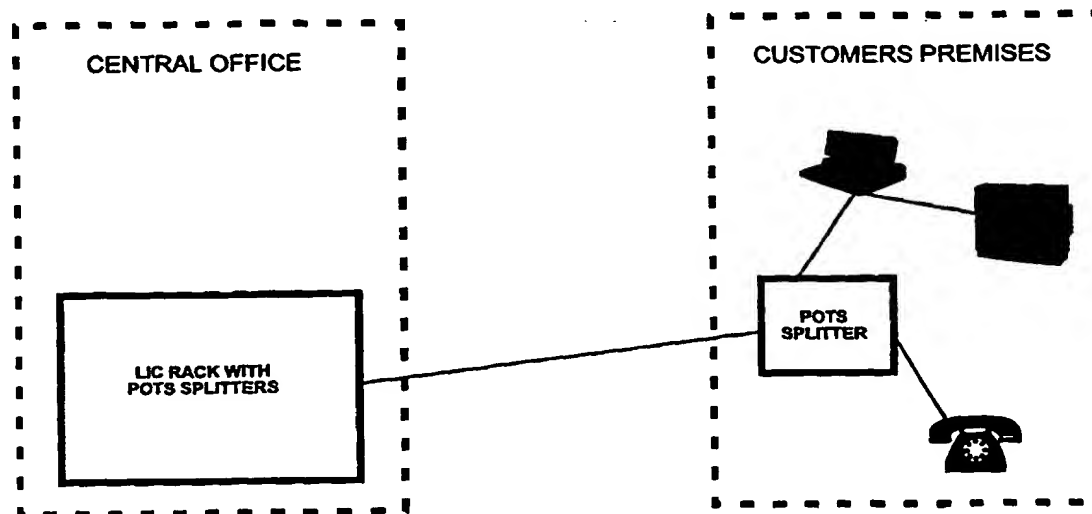




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup> : <b>H04M 11/00</b>		<b>A1</b>	(11) International Publication Number: <b>WO 99/39498</b>
			(43) International Publication Date: 5 August 1999 (05.08.99)
(21) International Application Number: PCT/SE99/00121		31, S-977 53 Luleå (SE). BENGTSSON, Daniel [SE/SE]; Forskarvägen 36A, S-977 53 Luleå (SE).	
(22) International Filing Date: 28 January 1999 (28.01.99)		(74) Agent: PRAGSTEN, Rolf; Telia Research AB, Vitsandsgatan 9, S-123 86 Farsta (SE).	
(30) Priority Data: 9800249-6      29 January 1998 (29.01.98)      SE		(81) Designated States: EE, JP, LT, LV, NO, US, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).	
(71) Applicant (for all designated States except US): TELIA AB (publ) [SE/SE]; Mårbackagatan 11, S-123 86 Farsta (SE).		Published With international search report.	
(72) Inventors; and (75) Inventors/Applicants (for US only): OLOFSSON, Sven-Rune [SE/SE]; Malmuddsvägen 9, S-972 45 Luleå (SE). OLS-SON, Lennart [SE/SE]; Majvägen 39, S-973 31 Luleå (SE). JOHANSSON, Joachim [SE/SE]; Professorsvägen 11, 5tr, S-977 51 Luleå (SE). ÖHMAN, Hans [SE/SE]; Fältspatstigen 21, S-977 53 Luleå (SE). ISAKSSON, Mikael [SE/SE]; Borgmästarevägen 7, S-973 42 Luleå (SE). JOHANSSON, Magnus [SE/SE]; Timmermansgatan 34, S-972 41 Luleå (SE). STEFANSSON, Tomas [SE/SE]; Lula- van 773, S-961 93 Boden (SE). BAHLENBERG, Gunnar [SE/SE]; Blidvägen 234, S-976 32 Luleå (SE). ISAKS- SON, Anders [SE/SE]; Elevvägen 1, S-977 25 Luleå (SE). ÖKVIST, Göran [SE/SE]; Hagaplan 7, S-974 41 Luleå (SE). LJUNGGREN, Lis-Marie [SE/SE]; Praktikantvägen			

(54) Title: IMPROVEMENTS IN OR RELATING TO TELECOMMUNICATIONS



## (57) Abstract

When delivering a broadband service, such as xDSL, without inband POTS, it is necessary to separate the analogue POTS signal and the xDSL signal from each other at both the CO (Central Office) and the CP (Customer's Premises). This can be achieved by using an active POTS splitter. The present invention incorporates test functionality for the line between the CP and the CO, or ONU (Optical Network Unit), in the POTS splitter. This enables two-sided measurements on the line, both during installation and during operation. The measurements are performed at the CO and upon request, or when the test device automatically sends a test message/signal. In this way there is no need for field technicians at the CP side. The POTS splitter can have a unique identity code that is transmitted to the CO each time a test is started, or on receipt of a request from the CO.

**FOR THE PURPOSES OF INFORMATION ONLY**

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	NZ	New Zealand		
CM	Cameroon			PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		